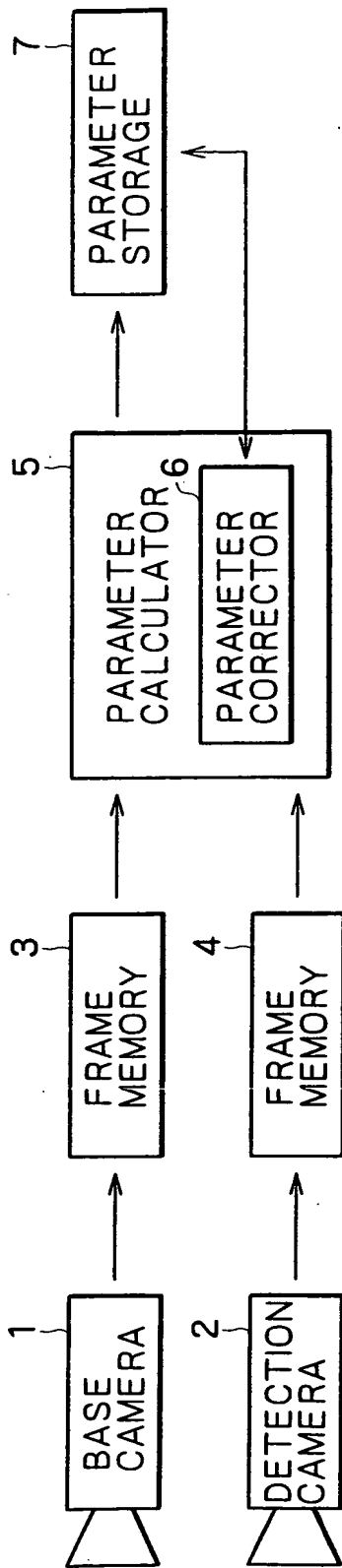
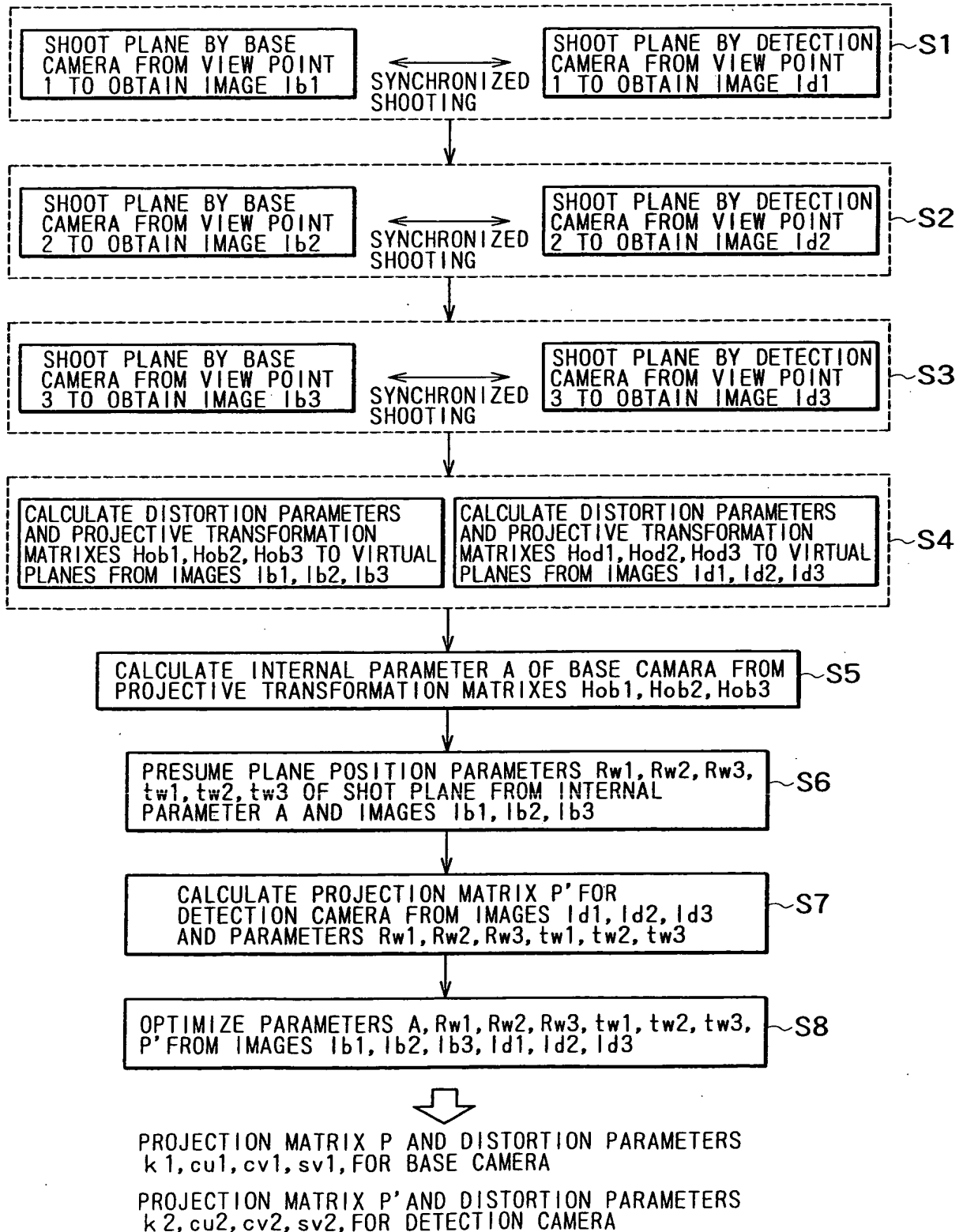


FIG. 1

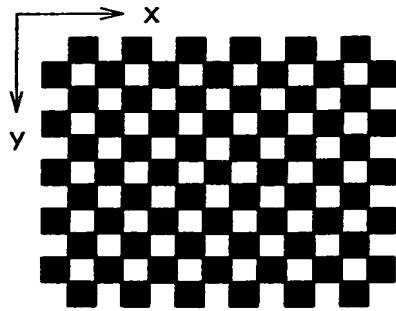


# FIG. 2

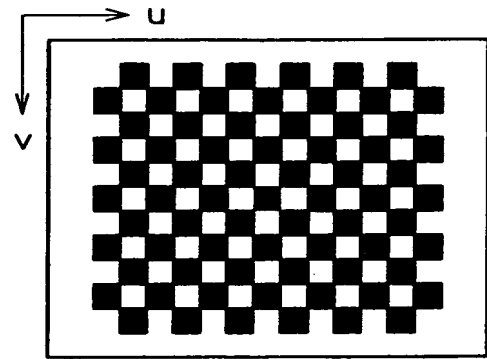


# FIG. 3

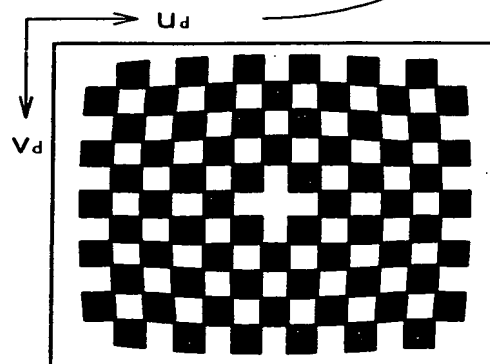
$$\begin{bmatrix} x \\ y \\ 1 \end{bmatrix} = H_0 \begin{bmatrix} u \\ v \\ 1 \end{bmatrix}$$



synthetic Image



undistorted Image



distorted Image

$$\begin{aligned} u &= u_d + (u_d - cu) kr_d^2 \\ v &= v_d + (v_d - cv) kr_d^2 \end{aligned}$$

FIG. 4

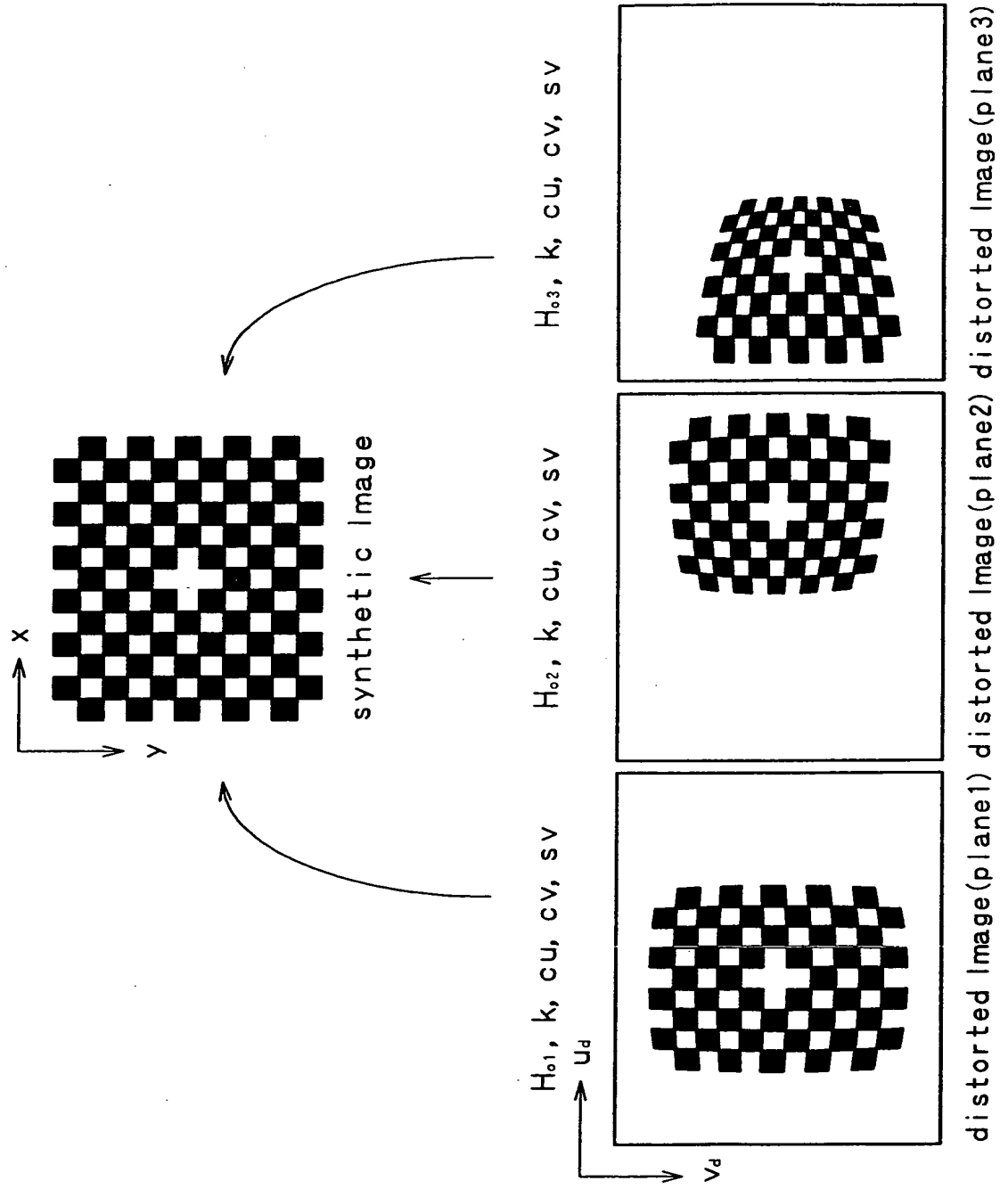
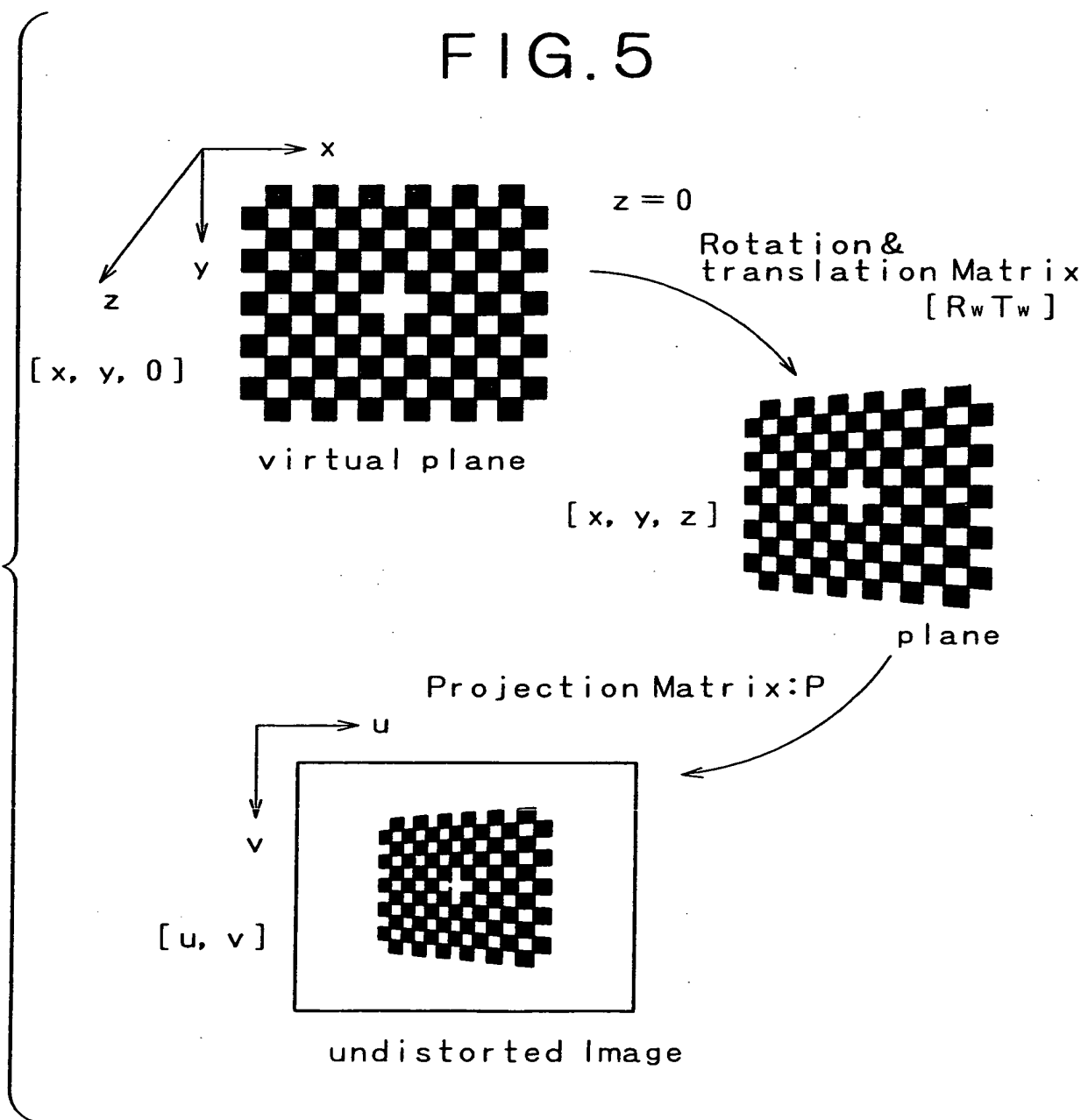


FIG. 5



# FIG. 6

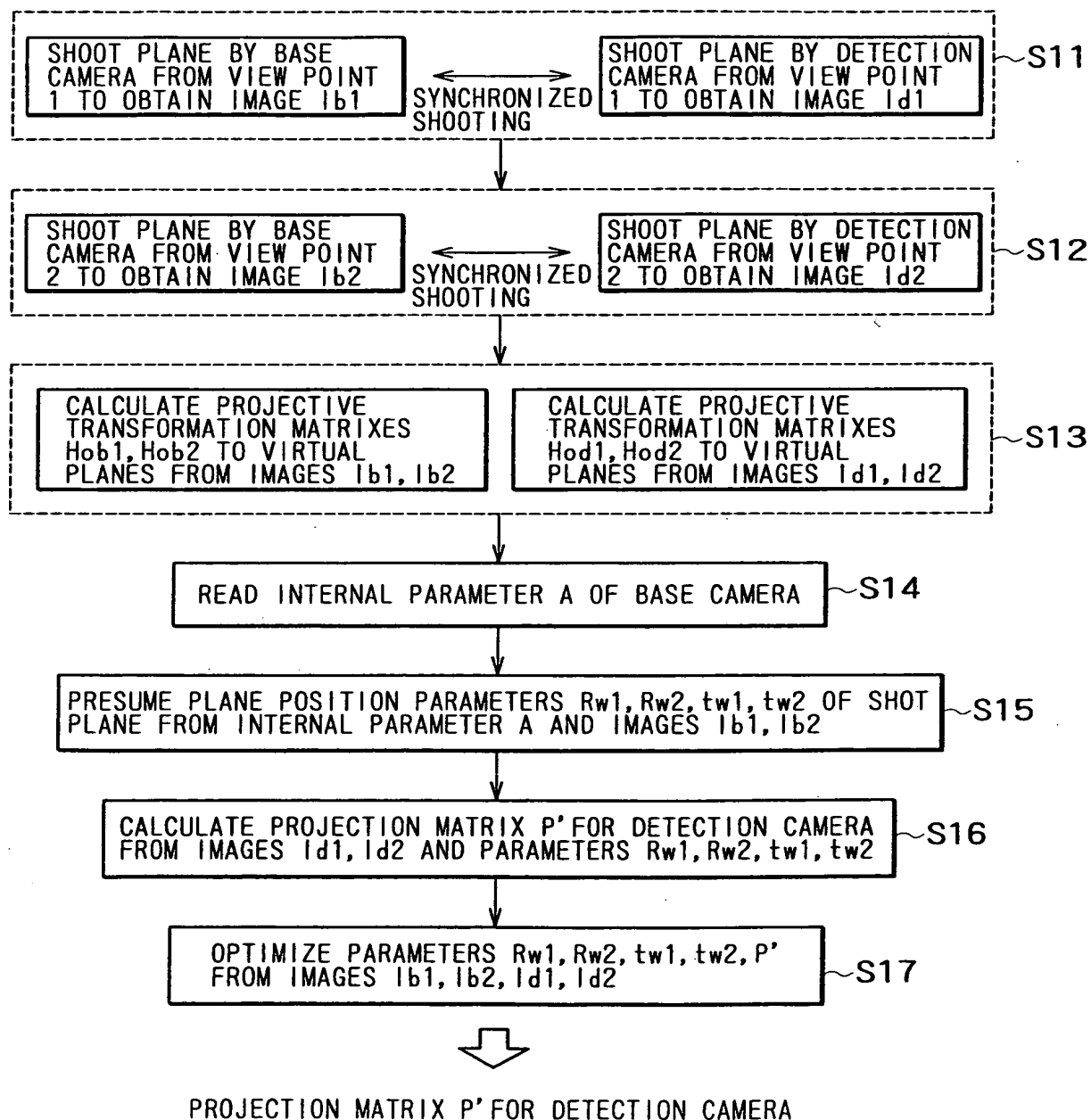
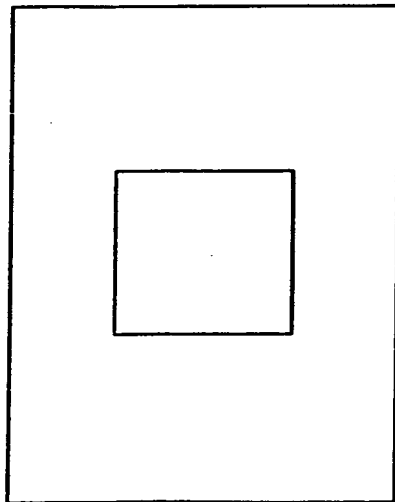


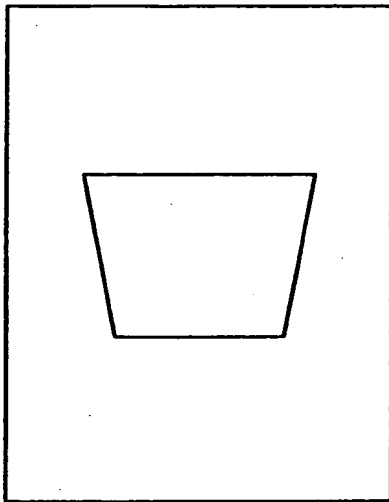


FIG. 8A



SHOT IMAGE FROM  
BASE CAMERA

FIG. 8B



SHOT IMAGE FROM  
DETECTION CAMERA



FIG. 9

